



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,970	12/15/2003	Joseph Edward Fattori	IR 7485-00	3383
23909	7590	08/24/2006	EXAMINER	
COLGATE-PALMOLIVE COMPANY			KARLS, SHAY L.	
909 RIVER ROAD			ART UNIT	PAPER NUMBER
PISCATAWAY, NJ 08855			1744	

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/735,970	Applicant(s) FATTORI, JOSEPH EDWARD	
	Examiner Shay L. Karls	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 1-18 are objected to because of the following informalities: Claim 1, line 5 reads “a treating implement” however it should read ---said treating implement---. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6, 9, 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Flatt (USPN 3029651).

With regards to claim 1, Flatt teaches drive system for imparting motion in a treating implement having a head (16) with a separate movable treating instrument having implement elements (15). The drive system comprising a motor (not labeled) with a rotatable motor shaft (5). There is a cam (6) driven around an axis of rotation by the motor shaft. The cam has an outer surface with a closed loop cam track (8). The treating implement head (13, 16, 15) is remote from the cam and a control member (23) is disposed between the cam and the treating implement head. The control member has a control slot (24) extending therethrough. There is a pivot member (20) located between the control member and the treating implement head. The pivot member has a through hole (22') also. The treating implement has a drive connection (11) mounted to the treating implement and disposed toward the pivot member. There is a drive shaft

Art Unit: 1744

(10) having a drive end and driven end. The drive end is freely mounted in the cam and the drive shaft extends through the control slot and the through hole in the pivot member. The driven end of the drive shaft is mounted to the drive connection of the implement head (figure 1).

With regards to claim 2, the control slot is a straight linear shape (figure 4).

With regards to claim 3, the cam track is circular (figure 5).

With regards to claim 6, the control slot extends radially from the axis of rotation (figure 4).

With regards to claim 9, the cam track does not extend beyond the axis of rotation (figure 5).

With regards to claim 12, the treating implement is a toothbrush, where the head is a cleaning head having an outer surface with cleaning elements (15) extending outwardly from the outer surface.

With regards to claim 13, the control slot is a straight linear shape parallel to the outer surface of the head. Flatt's control slot is set up in the same orientation with respect to the head as the applicant's control slot however, examiner believes it should read perpendicular rather than parallel.

With regards to claim 14, the cam track is circular (figure 5).

With regards to claim 15, the pivot member is a thin plate and the control member is a thin disk (figure 4 and figure 5).

With regards to claim 16, the control slot extends radially from the axis of rotation and the cam track does not extend beyond the axis of rotation (figure 4 and 5).

Art Unit: 1744

With regards to claim 17, the head is oscillated back and forth over a range of motion no greater than 30 degrees with respect to the axis of rotation as shown by the dashed lines in figure 1.

With regards to claim 18, the drive system is of straight linear shape, which is non-parallel to the outer surface of the head (figure 1). The dashed lines in figure 1 shows how the system is straight and non-parallel to the outer surface of the head.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flatt in view of Lev et al. (USPN 6895625).

Flatt teach all the essential elements of the claimed invention however fail to teach that the cam track is non-circular such as oval. Lev teaches a cam track (114) that is oval shaped. A

Art Unit: 1744

cam (106, 108) fit within the cam track and follow the path provided by the track. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the track of Flatt so that it is oval shaped as taught by Lev since the oval shaped track will allow for a broader range of movement and speed for the treating implement. Using an oval track will vary the linear reciprocating motion of the treating implement.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flatt in view of Stemme (USPN 3538530).

Flatt teach all the essential elements of the claimed invention however fail to teach that the control slot is non-straight or arcuate. Stemme teaches a toothbrush with a control member having an arcuate shaped control slot (figure 3 and 4). It would have been obvious to modify Flatt's control slot so that it was non-linear or arcuate as taught by Stemme since the arcuate shape leads to a figure eight motion. The figure eight motion will allow the bristles to move from one gum over the teeth towards the other gum, only to thereupon reverse their movement. This is the brushing motion that is preferred by dentist for properly cleaning teeth (col. 3, lines 60-71).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flatt in view of Prineppi (PGPub 2003/0066145).

Flatt teaches all the essential elements of the claimed invention however fails to teach that the driven end of the drive shaft comprises a ball joint. Flatt teaches that the driven end is attached to the head by a threaded connections (13, 14). Prineppi teaches a toothbrush with a drive shaft (14) having a ball joint (21) located on the driven end. The ball joint fits within a slot on the head. It would have been obvious to modify Flatt's driven end of the drive shaft to have a

Art Unit: 1744

ball joint and to modify the head to have a slot as taught by Prineppi so that the driven end can be connected to the head quickly and securely. Additionally, by using a ball joint wear is minimized between the driven end of the drive shaft and a slot in the toothbrush head ([0026]).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flatt in view of Stoltz (USPN 4149291).

Flatt teaches all the essential elements of the claimed invention however fails to teach a flexible bearing located in the through hole of the pivot member. Flatt's pivot member comprises a plate with hole, which receives the drive shaft. The drive shaft is secured within the hole by means of a pin. Stoltz teaches a vibrating toothbrush head with a pivot member comprising a flexible bearing (5). It would have been obvious to one of ordinary skill in the art to modify Flatt's pivot member with flexible bearing in the opening as taught by Stoltz so that all the axial forces from the drive shaft are picked up so that the cam and is not axially loaded (col. 2, lines 22-23). Additionally, the bearing help to lock the drive shaft in place so that it cannot turn axially when in use (col. 2, lines 24-26). Lastly the bearing will act as a gasket and prevent liquids from entering the handle portion.

Response to Arguments

Applicant's arguments, filed 6/16/06, with respect to Lev '625 and Bigler '904 have been fully considered and are persuasive. The rejections of Lev and Bigler have been withdrawn.

Lev and Bigler fail to teach a drive shaft freely mounted in cam track. Additionally, the shaft seal (82) of Lev does not function as a pivot member since the shaft does not pivot with the pivot member but reciprocates therethrough.

Applicant's arguments filed 6/16/06, with respect to Flatt '651 have been fully considered but they are not persuasive. Applicant argues that Flatt fails to teach a track since an aperture does not make a track. However according to the definition of track as provided by the applicant (course or path) and the definition of track according to Merriam-Webster's Dictionary (the course along which something moves), both read on the structure of Flatt. Flatt teaches an opening in which a drive shaft is freely mounted. The opening is larger than the drive shaft and therefore allows for movement of the drive shaft within the opening. Thus the opening defines the course along which the drive shaft moves. It is suggested that the applicant amend the claim to further describe the difference between the present invention's cam track and the prior art.

Additionally, the applicant added claim limitations regarding a separate movable treating instrument having implement elements. This added limitation has not overcome the Flatt reference since there is no distinguishing factor between the head of the treating implement and the separate moveable treating instrument. The claim language is confusing and thus creates a broader interpretation of the claim. First, the language "separate moveable treating instrument" does not clarify what element it is separate from. Secondly, there is no clarification as to whether or not the head is the element from which the "separate" treating instrument is separate. Also it is unclear what constitutes as the head since it is not stated that the head comprises implement elements or that the head is movable. It is suggested to clarify the language with regards to the treating implement in which the drive system is used.

Art Unit: 1744

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Karls whose telephone number is 571-272-1268. The examiner can normally be reached on 7:30-5:00 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Slk
8/22/06